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OPERATION REDWING. Project 3.1. Effect of Length of Positive Phase of Blast on Drag-Type and Semidrag-Time Industrial Buildings,

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Abstract:

The primary objective of the project was to obtain information regarding the effect of the length of the positive phase of blast on the response of drag and semidrag structures. A total of six steel-frame buildings were tested during this operation. The structure of each type nearest ground zero was located such that if the yield of the weapon was near the lower limit of its predicted range, it would probably undergo considerable inelastic deformation. Conversely, those structures farthest from ground zero were located such that if the yield of the nuclear device was near the upper limit of its predicted range, they would be substantially deformed, but would not collapse. The third building of each type was located at an intermediate point between these two extremes. Instrumentation was provided to obtain records of the transient structural deflections, strains, and accelerations, as well as of overpressure and dynamic pressure versus time at the sites of the various test structures.

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Collapse ^

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